

**RESPONSE UNDER 37 CFR §1.116
EXPEDITED PROCEDURE
EXAMINING GROUP 3732**

Atty. Docket No. 4002-2949

CLAIM AMENDMENTS

- 1-2. (Canceled)
3. (Previously Presented) The implant of claim 44 comprising fibers formed of one or more of: stainless steel, cobalt-chrome alloy, titanium, titanium alloy, or nickel-titanium shape memory alloys.
4. (Previously Presented) The implant of claim 44 wherein the network of fibers is substantially nonelastic.
5. (Previously Presented) The implant of claim 44 wherein the network of fibers comprises a three dimensional array of fibers.
6. (Previously Presented) The implant of claim 44 wherein the network of fibers comprises a deformable sheet or fabric-like material.
7. (Previously Presented) The implant of claim 6 wherein at least a portion of the network of fibers is deformable to conform to a selected bone structure.
8. (Previously Presented) The implant of claim 44 comprising a second network of fibers formed of a material selected from the group consisting of: biocompatible polymeric materials, nylon fibers, carbon fibers, glass fibers, collagen fibers, ceramic fibers, polyethylene fibers, poly(ethylene terephthalate), polyglycolides, polylactides, and combinations thereof.
9. (Previously Presented) The implant of claim 8 wherein the second network of fibers is biodegradable.

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10. (Previously Presented) The implant of claim 44 wherein the one or more reinforcing elements is formed of a material selected from the group consisting of: stainless steel, cobalt-chrome alloy, titanium, titanium alloy, or nickel-titanium shape memory alloys, biocompatible polymeric materials, nylon fibers, carbon fibers, glass fibers, collagen fibers, ceramic fibers, polyethylene fibers, poly(ethylene terephthalate), polyglycolides, polylactides, and combinations thereof.

11. (Previously Presented) The implant of claim 44 wherein said interconnecting network of fibers comprises a first set of fibers interwoven or bonded to a second set of fibers.

12. (Previously Presented) The implant of claim 44 adapted to secure to at least two adjacent vertebral bodies to promote spinal fixation.

13. (Canceled)

14. (Previously Presented) The implant of claim 44 wherein at least a portion of the interconnecting network of fibers is impregnated with an osteogenic material.

15. (Previously Presented) The implant of claim 44 comprising a first interconnecting network of fibers overlayed with a second interconnecting network of fibers.

16. (Previously Presented) The implant of claim 15 wherein the first interconnecting network of fibers comprises a three dimensional array of fibers.

17. (Previously Presented) The implant of claim 15 wherein the implant is deformable to conform to a selected bone structure.

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18. (Previously Presented) The implant of claim 15 wherein the first and second network of fibers are secured together using a securing element selected from the group consisting of: an adhesive, a curable polymeric material, a suture, a staple, and combinations thereof.
19. (Previously Presented) The implant of claim 15 wherein the first and second network of fibers are secured together to provide a barrier sufficiently porous to permit interdiffusion of an osteogenic material therethrough.
20. (Previously Presented) The implant of claim 44 comprising a second set of fibers formed of a biocompatible polymeric material.
21. (Previously Presented) The implant of claim 44 wherein the reinforcing element is formed of a shape memory polymeric or metallic alloy material.
22. (Previously Presented) The implant of claim 44 wherein the reinforcing element is adapted to conform to a preselected bone structure.
23. (Previously Presented) The implant of claim 44 adapted to interconnect proximal bone structures as a prosthetic ligament, a tension band or an external fixation device.
- 24-41. (Cancelled)

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42. (Previously Presented) An orthopedic implant comprising:
a plurality of metallic fibers interconnected together at junctures to form a network;
two or more reinforcing elements extending across a portion of the network adjacent said
junctures, each of said reinforcing elements provided to exhibit a tensile strength greater than a
selected metallic fiber of the plurality of metallic fibers;
an osteogenic material impregnated in said network, wherein said implant is adapted to
induce bone fusion between adjacent bone structures.

43. (Canceled)

44. (Previously Presented) An orthopedic implant for connecting adjacent bone
structures, said implant comprising:
an interconnecting network of metallic fibers each fiber joined to an adjacent fiber at a
junction, said interconnecting network bounded by a reinforcing band;
two or more reinforcing elements extending across a portion of the network adjacent said
junctures, each of said reinforcing elements provided to exhibit a tensile strength greater than a
selected metallic fiber of the interconnecting network of metallic fibers; and
an osteogenic material adhered to at least a portion of the implant, said implant adapted to
promote bone ingrowth.

45. (Previously Presented) A method of treating a bone defect, said method
comprising:
preparing a site of treatment to accept an orthopedic implant;
implanting proximal to said site an orthopedic implant comprising an interconnecting
network of metallic fibers said interconnecting network bounded by a reinforcing band, and
having one or more reinforcing elements secured to said network of metallic fibers,
applying an osteogenic material to said implant or to said bone defect to promote bone
fusion.

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46. (Original) The method of claim 45 wherein said implant is a bone plate.

47-48. (Canceled)

49. (Original) The method of claim 45 wherein said applying comprising applying the osteogenic material to the implant prior to implantation.

50. (Original) The method of claim 45 wherein said applying comprising applying the osteogenic material to the implant after implantation.

51-57. (Canceled)